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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,575	11/20/2001	Philippe Bernadat	10010857-1	3496

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

WILSON, YOLANDA L

ART UNIT PAPER NUMBER

2113

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/991,575	Applicant(s) BERNADAT ET AL.	
	Examiner Yolanda Wilson	Art Unit 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,2,4,6,11,13,17 are rejected under 35 U.S.C. 102(e) as being anticipated by Frey, Jr. (USPN 6530036B1), further known as Frey. As per claims 1 and 17, Frey discloses allocating memory objects in response to memory allocation requests, each object having an associated a plurality of addresses; storing type-identifier codes in association with memory objects, respectively; and responsive to a transient memory error at a memory address, identifying the memory object associated with the memory address, obtaining the type-identifier code associated with the memory object, selecting one of a plurality of recovery actions using the type-identifier code as selection criteria, and performing the one of the recovery actions in column 10, lines 17-56; column 9, line 53 – column 10, lines 12.
3. As per claim 2, Frey discloses storing the type-identifier codes within the memory objects, respectively in column 10, lines 17-31.
4. As per claims 4 and 11, Frey discloses wherein an operating system manages resources of the data processing system for use by application programs executing on

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the data processing system, and a first type-identifier code identifies memory objects used by the operating system and a second type-identifier code identifies memory objects used by the application programs in column 10, lines 17-31. The information can be added in the metadata.

5. As per claims 6 and 13, the one of the recovery actions comprises signaling an application program if the address of the memory error is associated with a memory object allocated to the application program in column 10, lines 17-31. The information can be added in the metadata.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frey, Jr. in view of Ngo et al. (USPN 6622269B1). As per claims 3 and 10, Frey, Jr. fails to explicitly state the type-identifier code is a program counter value from which allocation of memory is requested.

Ngo et al. discloses this limitation in column 6, lines 9-14, "Still regarding 141, each instruction in the test instruction sequence is uniquely identified by a corresponding instruction identifier. For example, the instruction identifier can be an address, including a program counter value, that points to a location in memory or in a register (including a program counter) where the instruction is stored."

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the type-identifier code be a program counter value from which allocation of memory is requested. A person of ordinary skill in the art would have been motivated to have the type-identifier code be a program counter value from which allocation of memory is requested because the program counter value allows for the address of the memory object to be known.

8. Claims 5,8,9,12,15,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frey, Jr. in view of Cohen et al. (USPN 6701451B1). As per claims 5 and 12, Frey, Jr. fails to explicitly state the one of the recovery actions comprises disregarding the error.

Cohen et al. discloses this limitation in the abstract, "The error-correction utility uses this information to determine, with a minimum of human intervention, which data errors to repair and which to ignore."

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have one of the recovery actions comprise disregarding the error. A person of ordinary skill in the art would have been motivated to have one of the recovery actions comprise disregarding the error because disregarding an error allows the computing system to remain operational. Cohen et al. discloses in column 1, lines 27-31, "It is not the case that every data error identified by the scanning utility will be repaired by an error-correction utility. In some cases, a data error is so severe that it cannot be repaired at all. In other cases, repair of a particular data error can result in other, more serious errors."

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9. As per claims 8 and 15, Frey, Jr. fails to explicitly state one of the recovery actions comprises logging information that describes the memory error.

Cohen et al. discloses this limitation in column 2, lines 4-7, "As the scanning utility performs the scan, it detects data errors in the mass-storage device. When it does so, it writes information descriptive of those data errors to the scan buffer."

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have one of the recovery actions comprises logging information that describes the memory error. A person of ordinary skill in the art would have been motivated to have one of the recovery actions comprises logging information that describes the memory error because logging error information allows the proper recovery from the error to occur. Cohen et al. discloses this in column 2, lines 7-9, "This information is thus available for later access by an error-correction utility or by a human operator."

10. As per claims 9 and 16, Frey, Jr. discloses an operating system manages resources of the data processing system for use by application programs executing on the data processing system, and a first type-identifier code identifies memory objects of a first type used by the operating system, a second type-identifier code identifies memory objects of a second type used by the operating system, a third type-identifier code identifies memory objects used by the application programs in column 10, lines 17-31. The information can be added in the metadata.

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Frey, Jr. fails to explicitly state for errors in memory objects associated with the second type-identifier code, the one of the recovery actions logs information that describes the memory error.

Cohen et al. discloses this limitation in column 2, lines 4-7, "As the scanning utility performs the scan, it detects data errors in the mass-storage device. When it does so, it writes information descriptive of those data errors to the scan buffer."

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have one of the recovery actions comprises logging information that describes the memory error. A person of ordinary skill in the art would have been motivated to have one of the recovery actions comprises logging information that describes the memory error because logging error information allows the proper recovery from the error to occur. Cohen et al. discloses this in column 2, lines 7-9, "This information is thus available for later access by an error-correction utility or by a human operator."

11. Claims 7,14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frey, Jr. in view of Lu (USPN 6012157A). As per claims 7 and 14, Frey, Jr. fails to explicitly state one of the recovery actions comprises halting the operating system.

Lu discloses this limitation in column 1, lines 28-31, "Normally, when is use in a computer, this RAM BIST controller will run tests on the RAM when the computer is powered up, and stop the operating system from loading if any defects in the RAM are found."


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Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have one of the recovery actions comprises halting the operating system. A person of ordinary skill in the art would have been motivated to have one of the recovery actions comprises halting the operating system because defects in memory causes the memory contents to be non-operational. Lu discloses in column 1, lines 21-24, "A defect in a RAM chip could cause serious problems, which include, among other things, the loss of important data and loss of computer function."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yolanda Wilson whose telephone number is (703) 305-3298. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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